NATIONAL DEFENSE CONTRACT

# MONTHLY PROGRESS REPORT NO. 6

# PRODUCTION REFINEMENT OF SHF-BAND HIGH-FREQUENCY TRAVELING-WAVE TUBES

Contract No. AF33(600)-26110
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During this report period various items of special test equipment were received, with work being directed toward its rearrangement and installation. The hydrogen firing furnace, r-f bombarders, assembling and bell jar brazing benches were received according to schedule.

Work is continuing on the installation of the air filtering and conditioning unit for which space is being made available.

During the laboratory vacation shutdown, July 19th through August 2nd, the rebuilding and reinstallation of the tube assembling area will be completed according to the floor plans outlined in the Special Engineering Report. Construction of the furnace and chemical cleaning areas has been completed, and equipment installation is now in progress.

Development of the broad-band sweeper is continuing without major design modifications being contemplated. Work has been completed on the life-test and low-noise-tube test sets. Fabrication of the higher power traveling-wave tube life and test sets has been initiated.

Tests were conducted on miniature coaxial lines and connectors in regard to VSWR versus frequency characteristics.

A comparison was made between the Type "N" and BNC Micro-Dot Adapter. These may be noted in Figure 1. From the results achieved to date it is apparent that the miniature connectors are not suitable for tube application without further engineering modifications.

The present status of work completed, scheduled for completion, and estimated time of completion can be seen in Figures 2 and 3.

ILLUSTRATIONS


| Fig. No. | Title |
|---|---|
| 1 | VSWR Versus Frequency for Type "N" and Micro-Dot Connectors |
| 2 | Schedule and Status for Rearrangement and Installation of New and Existing Facilities and Equipment |
| 3 | Engineering Status and Schedule |

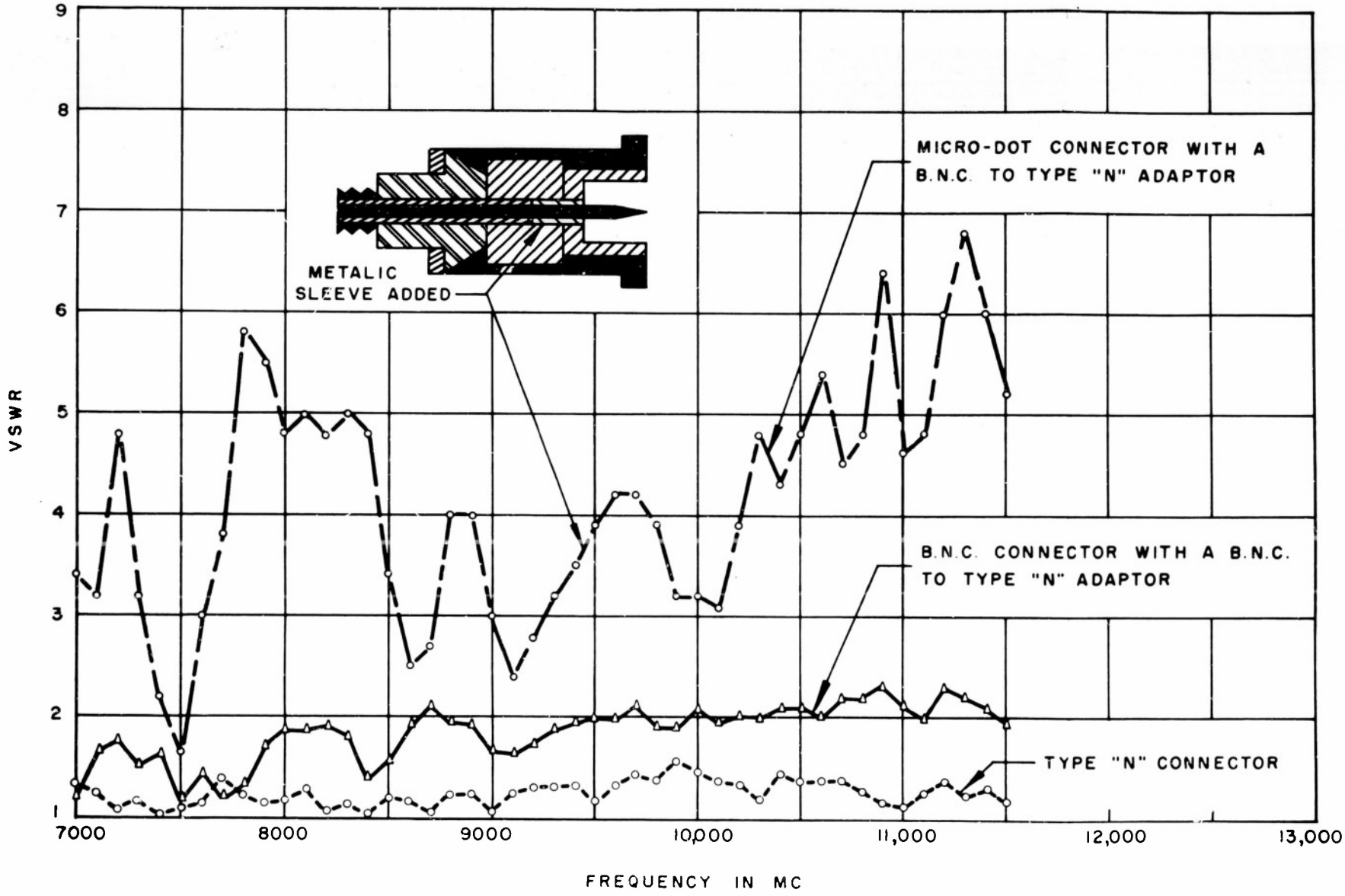


FIG. 1 VSWR VERSUS FREQUENCY FOR TYPE "N" AND MICRO-DOT CONNECTORS

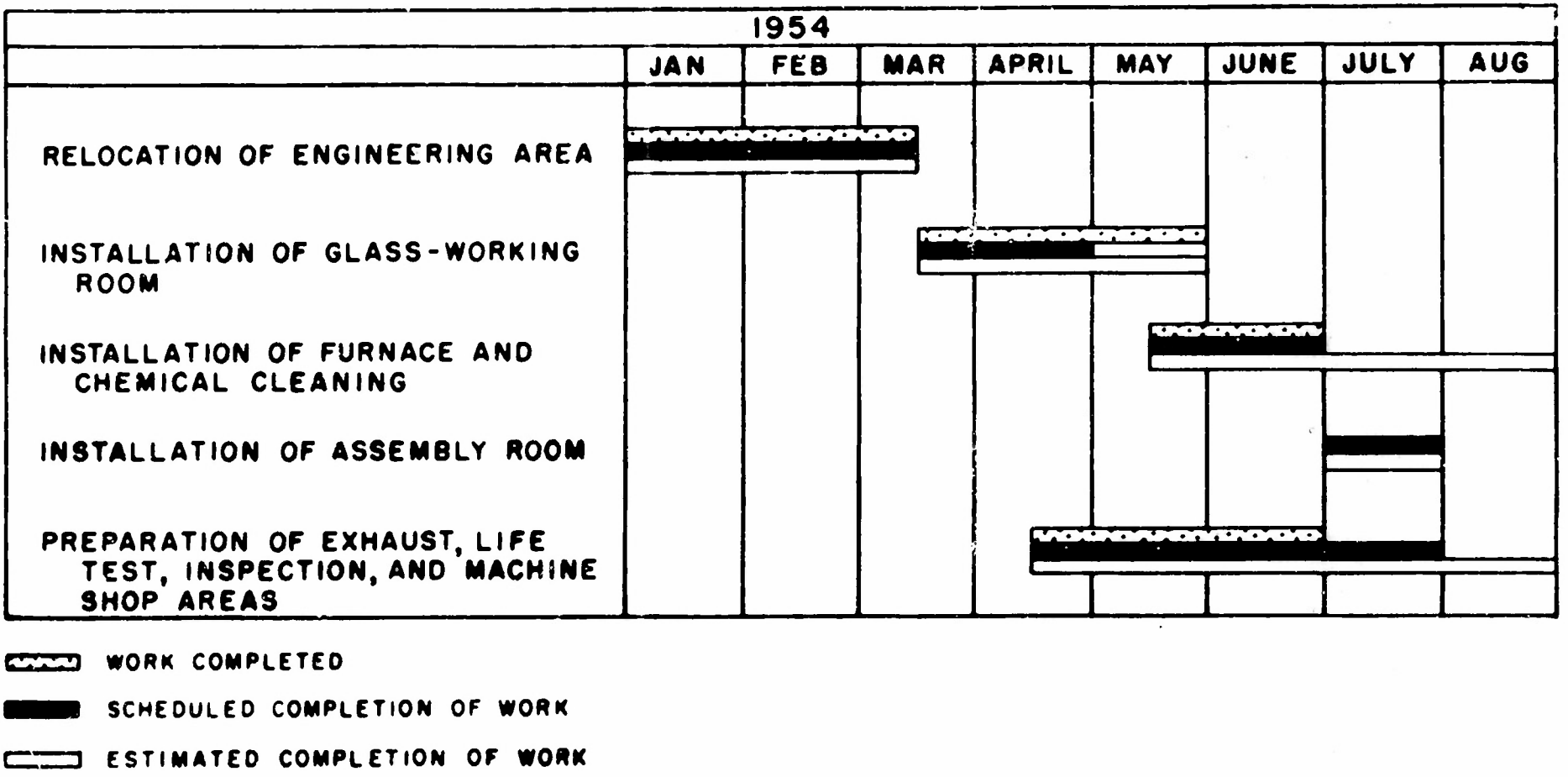


FIG. 2 SCHEDULE AND STATUS FOR REARRANGEMENT AND INSTALLATION OF NEW AND EXISTING FACILITIES AND EQUIPMENT

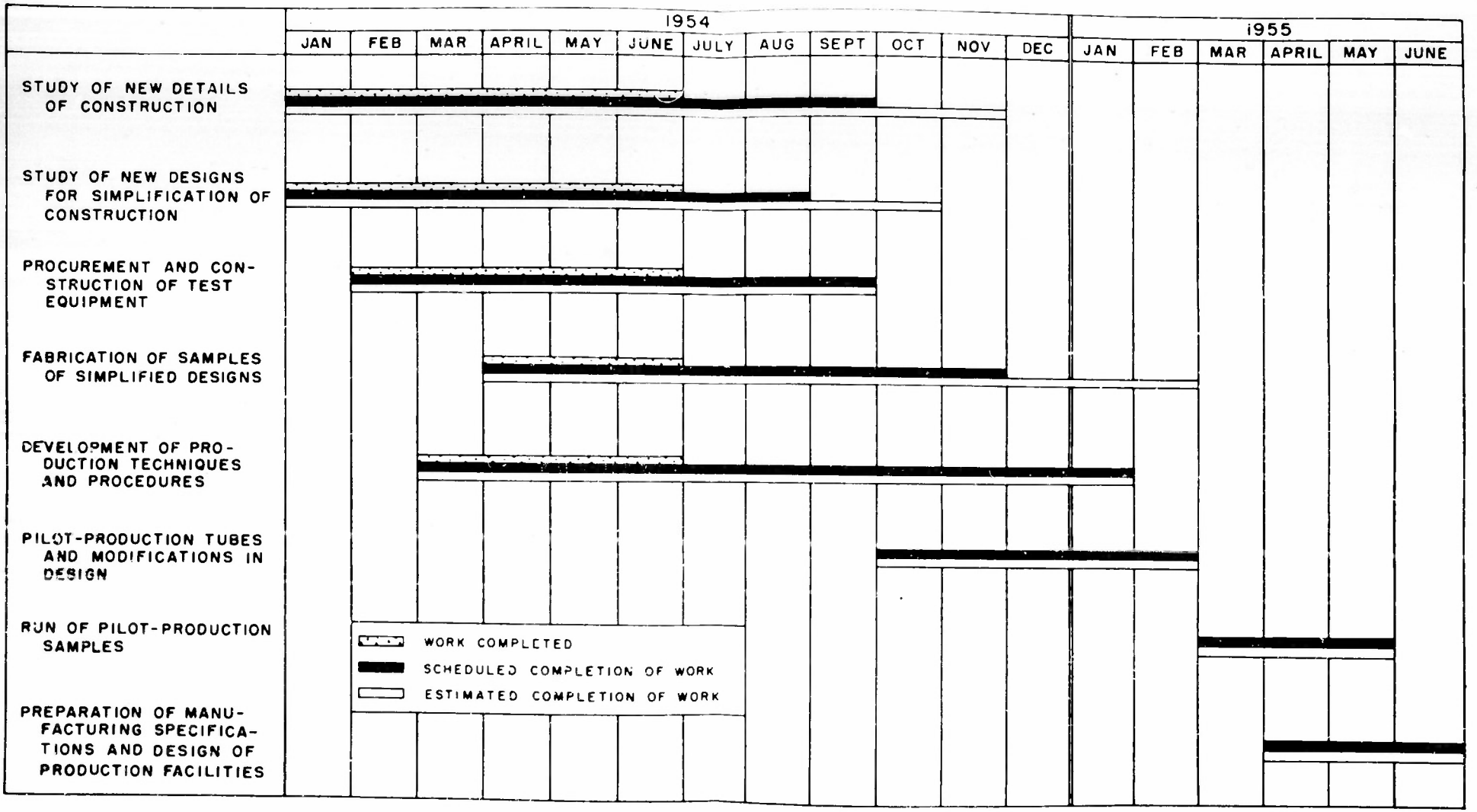


FIG. 3 ENGINEERING STATUS AND SCHEDULE